CELL SUSPENSION ROTATING FLUIDIC PUMP

Abstract of the Disclosure

A low pulsatility syringe pump including a duplex bearing set rotatingly supporting a lead screw, and a transmission having a first drive train configured to increase a number of motor rotations required for a single rotation of the lead screw, and a second drive train configured to reduce the number of motor rotations required for a single rotation of the lead screw as compared to the first drive train. Another embodiment also includes a motor configured to rotate the syringe about its own axis, independent of the motion of the lead screw. In this other embodiment, the fluid in the syringe barrel includes objects (such as cells, latex beads, etc.) entrained in the fluid. The rate of rotation (e.g., about three revolutions per second) is chosen such that each object traces a substantially circular pathway in the syringe barrel and remains in suspension.